

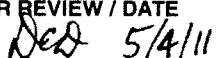





FEATURE: Klamath River Dams Removal Partial Removal Option Copco No. 2 Dam & Powerplant Removal Most Probable Low Life Cycle - 50 Year Operation and Maintenance - Initial Capital Costs				PROJECT: Klamath River Oregon			
				WOID: AF652	ESTIMATE LEVEL: Feasibility		
				REGION: MP	UNIT PRICE LEVEL: Jan-11		
				FILE: U:\2011 Projects\Klamath\002 Completed Sheets\MP MPL MPH\02 - Copco 2\MPL\Copco 2 MPL - Probable.xlsx\Life Cycle Summary			

PLANT ACCOUNT	T	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		1	Furnish, install, and maintain a 7-foot-high chain link fence on all four sides of the powerhouse (assume a double 12ft wide gate for vehicle access) (assume replace one time)	86-68130	500	lf	\$50.00	\$25,000.00
		2	Repaint exposed portion of penstocks (assume repaint 2 times) <i>Estimate assume minor paint repair ~ 2% area</i>	86-68130	18,300	ft2	\$3.50	\$64,050.00
		3	Repaint sloping trashrack at penstock intake (quantity based on repainting all four sides of each 4" by 1/2" bar in trashrack, 48-ft-wide by 32-ft-high vertical opening, includes top plate) (assume repaint 2 times) <i>Estimate assume minor paint repair ~ 2% area</i>	86-68130	8,900	ft2	\$4.00	\$35,600.00
		4	Repaint gratings at penstock intake (quantity based on repainting all four sides of each 5/16" by 2 1/4" bar in grating, assume repaint 2 times) <i>Estimate assume minor paint repair ~ 2% area</i>	86-68130	1,300	ft2	\$6.50	\$8,450.00
		5	Repaint caterpillar gate (assume access available to both sides of gate, assume repaint five times) <i>Estimate assume minor paint repair ~ 2% area</i>	86-68130	1,800	ft2	\$6.50	\$11,700.00
		6	Repaint caterpillar gate hoist structure (assume repaint 2 times) <i>Estimate assume minor paint repair ~ 2% area</i>	86-68130	1,400	ft2	\$6.50	\$9,100.00
		7	Repaint trashrake superstructure (assume repaint 2 times) <i>Estimate assume minor paint repair ~ 2% area</i>	86-68130	370	ft2	\$11.00	\$4,070.00
		8	Furnish, install, and maintain a 7-foot-high chain link fence on all four sides of penstock intake structure (assume single 3ft wide gate for access) (assume replace once times)	86-68130	350	lf	\$50.00	\$17,500.00
LIFE CYCLE SUBTOTAL								\$175,470.00

QUANTITIES		PRICES	
BY Rick Benik	CHECKED Stephen Latham	BY  Greg Akins	CHECKED  5/4/11
DATE PREPARED 03/21/11	PEER REVIEW / DATE Tom Hepler P.E. 3/24/11	DATE PREPARED 04/25/11 5/4/11	PEER REVIEW / DATE  5/4/11

FEATURE: Klamath River Dams Removal Partial Removal Option Removal Site Maintenance Most Probable Low Life Cycle - 50 Year Operation and Maintenance - Periodic Costs	PROJECT: Klamath River Oregon
	WOID: AF484 ESTIMATE LEVEL: Feasibility
	REGION: MP UNIT PRICE LEVEL Jul-10
	FILE: U:\2011 Projects\Klamath\002 Completed Sheets\MP MPL MPH\02 - Copco 2\MPL\Copco 2 MPL - Probable.xlsx\O&M

PLANT ACCOUNT	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
	1	Site Maintenance - Annual: Copco 2 Site only*		1	LS	\$30,000.00	\$30,000.00
		Labor needed per year	86-68130	90	mdy**		
		3-Man maintenance crew					
		6 Months active inspection/maintenance					
		2 Weeks full time (1 month each spring)					
		4 Full days, 2 times each month (5 months)					
		Site maintenance required at JC Boyle,					
		Copco 1 & Copco 2					
		Estimate prorated the time at each dam site based					
		on percent of total partial removal construction costs					
		Equipment needed per year	86-68130	30	dy***		
		1-Service truck					
		Includes compressor, welder, generator					
		and general tools					
		Estimate prorated the time at each dam site based					
		on percent of total partial removal construction costs					
		Materials needed per year (percentage of labor	86-68130	15%			
		& equipment)					
		Road maintenance needed per year (percentage	86-68130	10%			
		of labor & equipment)					
		*Total estimated cost for all 3 sites is approximately \$100,000 annually:					
		prorated ±30% for the Copco 2 site only					
		** Man days per year for 50 years					
		***Days per year for 50 years					
		SUBTOTAL THIS SHEET					\$30,000.00

QUANTITIES		PRICES	
BY Rick Benik	CHECKED Stephen Latham	BY  Greg Atkins	CHECKED  Shanna Matheson 5/4/11
DATE PREPARED 04/18/11	PEER REVIEW / DATE Tom Hepler P.E. 4/18/11	DATE PREPARED 5/4/11	PEER REVIEW / DATE  5/4/11